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ABSTRACT

A brief presented by the Council of Ontario Universities (COU) addresses financial requirements for 1981-82 for the Ontario university system. The first section of the brief examines the government's announced funding level for 1980-81 and contrasts this with the implications of the advice submitted by COU and the Ontario Council on University Affairs (OCUA) for the previous year. The position of Ontario's universities in relation to others in Canada is examined as is the position of the university sector in relation to other government supported sectors of the Ontario economy. Section Two provides the details of COU's advice to OCUA for 1981-82 and works within the framework of OCUA's system funding model. Section Three examines the operating and capital requirements of the Ontario government this decade and notes that present fiscal restraint is the result of a government decision to fund all financial requirements, both operating and capital, out of current revenue. An extrapolation of current university funding levels is made through 1983-84. Observations on the meaning of massive underfunding of universities in Ontario are presented. (SW)

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BRIEF TO THE
ONTARIO COUNCIL ON UNIVERSITY AFFAIRS

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CHANGING PUBLIC PRIORITIES: UNIVERSITIES AND THE FUTURE OF ONTARIO

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Prepared by the
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March, 1980

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COUNCIL OF ONTARIO UNIVERSITIES
CONSEIL DES UNIVERSITÉS DE L'ONTARIO

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1980 03 18

Dr. W.C. Winegard
Chairman
Ontario Council on University Affairs
700 Bay Street
7th Floor
Toronto, Ontario.

Dear Dr. Winegard:

On behalf of the Council of Ontario Universities, I am pleased to transmit to you our 1980 brief on operating support to the Ontario Council on University Affairs. This brief, prepared by the COU Committee on Operating Grants, was approved by our Council at its meeting of 14 March 1980.

You will note that the brief makes no reference to the proposal to establish a fund for programme innovation, a matter raised in your letter of 4 October 1979. Council considers that implementation of such a proposal, at a time when universities are so constrained to meet ordinary operating expenditures, would be impractical. Should general financial conditions improve, however, Council may wish to reconsider its position on this matter.

We look forward to our meeting with OCUA on 18 April for a continuing dialogue on matters of urgent interest to the Ontario university community.

Sincerely,

Edward J. Monahan
Executive Director

EJM:bk

PREFACE

Each year at this time the Council of Ontario Universities (COU) presents advice to the Ontario Council on University Affairs (OCUA) and thereby to the Government of Ontario on the increase in funding required for the Ontario university system. This year's brief, in a similar format to those which we have prepared in the recent past, addresses financial requirements for 1981-82. It does so in the context of past and projected levels of funding.

Section 1.0 examines the government's announced funding level for 1980-81 and contrasts this with the implications of the advice submitted by COU and OCUA last year. The section concludes that the government chose to provide for only about 55% of the increase in funding required for 1980-81 and notes that the cumulative effect of underfunding since OCUA's advice was last accepted by the government, i.e. in 1977-78, now totals $159.7 million. The position of Ontario's universities vis-à-vis others in Canada is examined as is the position of the university sector vis-à-vis other government supported sectors of the Ontario economy. The conclusion is reached that, whether by direction or indirection, there has been a definite shift of government priorities during the present decade which has seriously disadvantaged the universities of this province.

Section 2.0 provides the detail of COU's advice to OCUA for 1981-82

and works within the framework of OCUA's system funding model. The section concludes with a recommendation for a 13.0% increase in funding in 1981-82 to meet basic requirements.

Section 3.0 examines the operating and capital requirements of the Ontario government this decade and notes that present fiscal restraint is the result of a government decision to fund all financial requirements, both operating and capital, out of current revenue. An extrapolation of current university funding levels is made through 1983-84; should such an extrapolation parallel reality, underfunding of the university system in Ontario will approximate 30% of actual funding.

The brief concludes with some observations on the meaning of massive underfunding of universities in Ontario. Government fiscal policy is causing a serious deterioration in the quality of a university system we believe to be a principal agent in this province's future development. Do we really want this to happen? Are we mortgaging our future to pay our present debts?

1.0 BACKGROUND ON FUNDING

1.1 The Basis for Analysis

For the past several years, the Operating Grants Committee has begun its annual advice to OCUA with an analysis comparing the announced government funding level and the recommendations of COU and OCUA respectively. While it is our wish to continue this process, the task is complicated this year by the need to adjust some of the fundamental assumptions which underpin the advice of both bodies.

It is worth reminding ourselves that the COU operating grants brief is usually finalized in February of the year prior to that for which advice is being given (and ten months prior to any government decision on the matter). OCUA's advice to the government is now submitted in May and a government decision will usually appear in the period from November-January. While this extended time frame affords the government the opportunity of reflecting seriously on the advice it receives, there are occasions when the availability of more timely information to COU and OCUA would have given rise to significantly different funding advice.

Thus, in undertaking a comparative analysis of this sort, it is important to bear in mind that COU and OCUA are in basic agreement

as to how the costs of the university system should be projected. While the Government of Ontario does not make explicit the underlying assumptions of its own determination of the universities' financial needs, it clearly knows of, understands and was once able to support the outcome of the OCUA funding model. In these circumstances, we believe it reasonable and appropriate to retrospectively adjust COU's and OCUA's advice to take account of factors which would have been known to the government when it reached its own funding decisions. Traditionally, we have done this to reflect current year enrolment levels; for the first time this year, we find that a similar adjustment is required for inflation.

1.2 Comparison of COU Request and OCUA 79-II

Table 1-1 sets out the implications of the advice of both COU and OCUA. With respect to inflation, COU had originally assumed, based on material provided by the Economic Council of Canada in the fall of 1978, an inflation rate of 6% for 1980-81. OCUA, "relying upon forecasts .... made by competent authorities", assumed an inflation rate of 8%. As is indicated in Table 2-1 (p.21), a moderate assumption for inflation for 1980-81 of 10% would be more appropriate. In application of the inflation rate, COU and OCUA agreed with

Table 1-1

Recalculation of OCUA and COU Funding Recommendations for 1980-81

($000,000's)

	Estimated Expenditure 1979-80	Inflationary Trend Cost 1980-81	Existing Service Level Cost 1980-81	Efficiency Factor (Negative)	Predicted Enrolment Costs 1980-81	Excess Capacity Factor + or (-)	Cost of Basic Objectives 1980-81
OCUA							
Salaries	703.3	70.3	15.5	(5.5)	3.1	(1.6)	785.1
Benefits	81.0	8.1	1.8	(0.6)	0.4	(0.2)	90.5
Non-Salary	203.5	25.0	8.5	(1.6)	0.9	(0.5)	235.8
Total	987.8	103.4	25.8	(7.7)	4.4	(2.3)	1,111.4
COU							
Salaries	703.3	70.3	15.5	(0.8)	3.2	(1.6)	789.9
Benefits	81.0	10.5	2.4	(0.1)	0.4	(0.2)	94.0
Non-Salary	203.5	25.0	5.7	(0.2)	0.9	(0.5)	234.4
Total	987.8	105.8	23.6	(1.1)	4.5	(2.3)	1,118.3

respect to salaries and non-salary items. OCUA did not agree, however, with COU's recommendation that a provision for benefit cost increases be permitted at a level of 130% of the salary inflation rate. This generated a difference of $2.4 million between the advice of the two agencies.

With respect to existing service level costs, we agreed on salaries, differed on fringe benefits and took entirely different approaches to non-salary items. COU in its advice followed the traditional route of including a 2.5% factor as a provision for equipment replacement. OCUA made a special request for $8 million for equipment and library acquisitions and for $0.5 million for additional bilingualism costs.

COU and OCUA continued to disagree on the application of an efficiency factor creating a difference of $6.6 million between the two sets of advice, and agreed on an enrolment projection of -2.5%. In fact, overall full-time equivalent enrolment has increased by 0.4% and our advice has been accordingly adjusted.

Notwithstanding the minor differences in approach taken by COU and OCUA, it should be reiterated that both bodies are in basic agreement on the appropriate model to use in the estimation of the basic financial requirements of the Ontario university system. The outcome of this model, using data that were available to the government when it made its decision on university grants for 1980-81, is a requirement for increased funding from all sources of between $123.6 and $130.5 million or 12.5% (OCUA) and 13.2% (COU) respectively. The results differ considerably from COU's original estimates of 7.2% and OCUA's 9.2%.

1.3 The Government's Provision for 1980-81

On 31 December, 1979, the Minister of Colleges and Universities announced the provision of $838.8 million for 1980-81. This amount is made up of two components: $6.0 million for Ministry line item budgets and $832.8 million available for distribution by OCUA. The total amount provided represents a 7.2% increase over 1979-80 funding.

In addition, the Minister announced an increase in formula fees of 7.5% and indicated that henceforth universities would be permitted to set actual fees at 110% of formula fees, without penalty. In estimating total university revenue for 1980-81, we shall for the moment set aside consideration of the latter provision.

While "other revenue" in 1979-80 may be higher than expected because of windfall gains arising from higher interest rates, we believe OCUA's assumption of no growth in "other revenue" in 1980-81 to be a reasonable one.

Using OCUA's estimate of 1980-81 "other revenue" of $60.1 million (see however section 2.9.1 of the present brief) and our estimate of $164.7 million for tuition fee revenue (which includes a 7.5% fee increase and projected enrolment growth of 0.9%), we are now in a position to compare the advice of COU and OCUA with the implications of the government's announced level of financing.

(in $ millions)	1979-80	1980-81		
		COU	OCUA	MCU
Available for distribution by OCUA	$775.9	$ 893.5	$ 886.6	$ 832.8
Tuition fees	151.8	164.7	164.7	164.7
Other revenue	60.1	60.1	60.1	60.1
Total	$987.8	$1,118.3	$1,111.4	$1,057.6
% Increase over 1979-80		13.2	12.5	7.1

The outcome of this comparison is starkly straightforward. The OCUA funding model generates a minimum revenue requirement for the Ontario university system in 1980-81 some $53.8 million (OCUA) to $60.7 million (COU) above that which will arise from the government's announced grant level.

In addition, COU estimates that the cumulative effects of underfunding, since the government's programme of fiscal restraint first had impact on the university sector in 1978-79, now amount to $159.7 million.[1] It should be noted that this definition of underfunding does not relate to some ideal view of a continually developing university system. Rather it is based upon a conservative measurement of the impact of inflation on universities during the past three years and includes

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[1] The figure of $159.7 million is taken from Table 3-3, p 58. It is derived by compounding the effects of individual annual shortfalls identified by COU during the period 1978-79 to 1980-81. A comparable figure, using OCUA's advice, would be $129.2 million.

an acknowledgement that modest enrolment declines have occurred during this period. In no way does it address the constraint placed upon the university system between 1970-71 and 1977-78 which was identified by OCUA in its Fourth Annual Report.

The Operating Grants Committee cannot point as yet to any dramatic manifestations of this level of underfunding. But this is not surprising. Exercising the requisite fiscal restraint to be expected of responsible public institutions, universities have not run massive deficits. And to the fullest extent possible, they have maintained the breadth of programme offerings which characterize a mature and diverse provincial university system. Instead, salaries have been permitted to decline with respect to other sectors of our society; faculty and staff complements have been reduced; library acquisition budgets have been pared; necessary equipment is not being updated; buildings are receiving less maintenance.

It should be understood that the sum of all these things <u>has not</u> and <u>will not</u> produce the drama that some observers seek as evidence that our university system is genuinely threatened. Responsible university management necessarily strives for quite the opposite - a relatively stable environment in which teaching and research of the highest level possible can be carried out. There can be no doubt, however, that the continuing erosion of the universities' fiscal base has caused and will cause, over time and somewhat insidiously, our university system to change for the worse.

It is within this context therefore that one should view the dilemma which universities face in considering whether to implement an additional 10% increase in fees in 1980-81. While there can be little doubt at any institution of the need for additional funding, the very magnitude of what would amount, for some, to an increase of over 18% in tuition fees in one year will cause all institutions to reflect very seriously on their new found freedom to adjust fees above formula levels. At each, different factors will come into play which will cause variation in institutional policy in 1980-81 and subsequent years. At one institution, a decision might hinge on a perception of the overall effectiveness of the OSAP programme for its particular student mix; at another, the timing of the announcement relative to 1980-81 budget planning may be an important factor. Ultimately, however, we believe that most if not all institutions will exercise this so-called fee "autonomy" as one means of overcoming the deficiencies of government funding. In 1980-81 dollars, raising fees to 110% of formula levels would generate additional university revenue of about $16 million against the cumulative shortfall of $159.7 million.

1.4 Inter- and Intra-Provincial Comparisons

In the light of so gross a level of apparent underfunding, one must ask whether the assumptions which COU and OCUA use to calculate minimum financial requirements are unreasonable by comparison to some standard against which

university expenditure in Ontario can be measured. Unfortunately, no absolute standards exist. We can, however, compare the position of Ontario's universities to the situation of universities elsewhere in Canada and the Ontario university sector to the position of other major government supported sectors within the Province. The Operating Grants Committee judges that these comparisons sustain its belief that the Ontario university system has been and continues to be seriously underfunded by comparison to universities elsewhere in Canada and with respect to other activity supported by the Government of Ontario. The data used in this analysis are in each instance extended back in time as far as possible, dependent on availability or quality and comparability.

The Tripartite Committee on Interprovincial Comparisons of University Expenditures was constituted in November, 1977 from among staff of the Ontario Council on University Affairs, the Ministry of Colleges and Universities, and the Council of Ontario Universities. The Tripartite Committee issued its first report in May, 1979, a report which outlined eight indicators for comparing the financial position of university systems among the Canadian provinces. Three fiscal years were included in the first report, 1974-75, 1975-76 and 1976-77. Since last May, the Tripartite Committee has been working to

update its data base to include 1977-78 and 1978-79, but not all provinces reported in time for a complete set of information to be compiled for this brief. Estimates have been provided based on percentage changes in grants and enrolment information collected by OCUA.[2]

Of the interprovincial indicators developed by the Tripartite Committee, probably the most directly relevant to the questions addressed in this brief is the level of provincial operating grant per student. This provides a measurement of the direct relationship between the level of government support to universities and the number of students which those universities are expected to educate. Table 1-2 shows the levels of operating grants per student for all ten provinces for each of five years, 1974-75 through 1978-79.

During these five years, Ontario's position in relation to other provinces has declined from fifth to seventh place. By the 1978-79 fiscal year, only the governments of Nova Scotia, Prince Edward Island and Manitoba were estimated to be providing smaller operating grants per student than the Government of Ontario. The nine provincial governments outside of Ontario were making operating grants of $515 per student more than the

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[2] System on the Brink, Ontario Council on University Affairs, 1979, p. 12

Table 1-2

Interprovincial Comparisons of University Operating Grants
Provincial Operating Grants per FTE Student, 1974-75 to 1978-79

	1974-75		1975-76		1976-77		1977-78		1978-79	
	$	(rank)	$	(rank)	$	(rank)	$	(rank)	$	(rank)
British Columbia	$2981	(3)	$3577	(3)	$4014	(3)	$4400 e	(4)	$4731 e	(4)
Alberta	2965	(4)	3545	(4)	3982	(4)	4435	(3)	4962 e	(2)
Saskatchewan	2812	(6)	3324	(5)	3633	(5)	3934	(5)	4353 e	(5)
Manitoba	2591	(8)	3012	(7)	3446	(7)	3865	(7)	4111	(8)
Quebec	3064	(2)	3769	(2)	4133	(2)	4538	(2)	4903 e	(3)
New Brunswick	2659	(7)	2934	(9)	3345	(8)	3850	(8)	4293	(6)
Nova Scotia	2484	(9)	2939	(8)	3321	(9)	3558	(9)	3887	(9)
P.E.I.	2287	(10)	2424	(10)	2715	(10)	2963	(10)	3502	(10)
Newfoundland	3094	(1)	3899	(1)	4469	(1)	4826	(1)	5672	(1)
Weighted average for 9 provinces outside Ontario	2919		3516		3917		4316		4718	
Ontario	2838	(5)	3085	(6)	3447	(6)	3873	(6)	4203	(7)
Canada	2888		3352		3738		4154		4535	

e - estimate

Government of Ontario. That is, universities outside of Ontario were receiving an average of 12.2% more per student than universities within Ontario.

Other indicators developed by the Tripartite Committee paint a similar picture and are, perhaps, less prone to short-term fluctuations in enrolment. For example, Table 1-3 relates the level of government support for universities to the level of personal income in each of the provinces. The assumption is

that wealthier provinces may be able to provide higher levels of funding for their universities than poorer provinces. That is, some provinces may not be able to "afford" as high a quality of university education for their citizens as other provinces. Is that the case in Ontario?

This table suggests that some provinces - Newfoundland, Nova Scotia and Quebec - are directing a relatively high proportion of their

Table 1-3

Provincial Operating Grants for Universities
Per $1000 of Provincial Personal Income

	1974-75	1975-76	1976-77	1977-78	1978-79	Rank 1978-79
British Columbia	9.68	10.74	10.63	10.36 e	10.26 e	(8)
Alberta	12.28	12.99	12.64	12.40	11.91 e	(5)
Saskatchewan	10.73	10.70	10.96	11.49	11.44 e	(7)
Manitoba	11.78	11.92	12.50	12.91	11.82	(6)
Quebec	12.55	13.84	13.50	14.45	14.69 e	(3)
New Brunswick	13.81	13.49	13.32	13.62	13.45	(4)
Nova Scotia	15.40	16.98	16.93	16.63	16.29	(2)
P.E.I.	10.93	10.16	10.19	10.40	9.81	(10)
Newfoundland	13.88	14.99	15.96	16.53	16.61	(1)
Weighted average for 9 provinces outside Ontario	11.99	12.92	12.79	13.18	13.09	
Ontario	10.43	10.58	10.69	10.52	10.03	(9)
Canada	11.36	11.99	11.96	12.13	11.89	

e - estimate

resources into universities. Other provinces - Prince Edward Island, Ontario, and British Columbia - are spending relatively less money on universities. Again, Ontario is one of the provinces at or near the bottom of the list in terms of expenditures on universities.

This is not the case for other parts of the public sector. Hospitals and elementary and secondary schools, for example, are better funded in Ontario than elsewhere. Table 1-4 presents the most recent data available on interprovincial comparisons of expenditures on public hospitals during 1977-78 and on schools during 1976-77. In both instances, it shows Ontario to occupy second place in Canada in terms of expenditure per client. It also demonstrates, we believe, that whether by direction or indirection, a shift in priorities has occurred in provincial government spending patterns in Ontario. This conclusion seems inescapable despite the government's assertion that higher education in Ontario continues to be a matter of high priority.

Table 1-5 shows the level of provincial operating grants to universities as a share of the total budgetary expenditures of the Ontario government for the past eight years. These data provide a concrete indication of the spending priorities of the

Table 1-4

Interprovincial Comparisons of Total Operating Expense per Client

	Total Operating Expense per Patient Day (Public Hospitals, 1977-78)		Total Expenditures Per Pupil (Elementary & Secondary Schools, 1976-77)	
	$	Rank	$	Rank
British Columbia	113.98	(8)	$1,815	(2)
Alberta	120.71	(7)	1,718	(6)
Saskatchewan	103.32	(9)	1,729	(4)
Manitoba	139.45	(4)	1,727	(5)
Ontario	148.43	(2)	1,815	(2)
Quebec	132.11	(5)	2,256	(1)
New Brunswick	129.03	(6)	1,470	(9)
P.E.I.	102.47	(10)	1,588	(8)
Nova Scotia	146.80	(3)	1,618	(7)
Newfoundland	162.77	(1)	1,382	(10)

Source: Statistics Canada, 83-217 Annual, Hospital Statistics-Preliminary Annual Report, 1977-78

Statistics Canada, 81-208 Annual, Financial Statistics of Education

Ontario government and show how much importance, relative to other sectors of public spending, is given to universities. The table suggests that there has been a significant and consistent decline for almost a decade in the priority attached by the provincial government to university education. Since 1972-73, there has been a decline of between 12-15% in the universities' share of total provincial budgetary expenditures (dependent on the exclusion or inclusion of debt servicing). While the changes in percentage share look small, it should be

noted that each tenth of one percent represents about $15 million in 1979-80 terms. This trend has continued to such an extent that, even within the presently constrained provincial budget, returning universities to the same spending priority as existed in 1972-73 would have required an increase in operating grants of approximately $110-$145 million during 1979-80.

Table 1-5

Share of Provincial Expenditures:
Provincial Grants for Operating Costs for
Universities and Related Organizations
($ millions)

	Operating Grants	Total Budgetary Expenditures	%	Budgetary Expenditures Minus Public Debt Interest Payments	%
1972-73	$396.6	$6,480.3	6.1	$6,003.4	6.6
1973-74	$423.9	$7,301.9	5.8	$6,698.5	6.3
1974-75	$485.8	$8,821.6	5.5	$8,133.4	6.0
1975-76	$565.5	$10,632.2	5.3	$9,765.5	5.8
1976-77	$649.3	$11,921.2	5.5	$10,852.7	6.0
1977-78	$703.6	$13,129.5	5.4	$11,887.3	5.9
1978-79	$744.2	$14,156.9	5.3	$12,682.6	5.9
1979-80 (est.)	$782.3	$15,197.4	5.2	$13,516.5	5.8

Source: Public Accounts, Province of Ontario, various years
Estimates, Province of Ontario, 1979-80

Additional indications that a change in government spending priorities has taken place can be developed by directly comparing

expenditures on universities with expenditures on other parts of the public sector. OCUA has already demonstrated that the "trend in funding of universities is in sharp contrast to the funding of the elementary and secondary school systems", and that "school revenue per pupil rose 35.5% in real terms between 1970-71 and 1978-79, compared with a 8.0% decline in university revenues per student during the same time period"[3]. Similar comparisons can be made with other sectors, some of which are shown in Table 1-6.

Table 1-6

Expenditures Per Client Served, 1973-74 to 1977-78

		1973-74	1974-75	1975-76	1976-77	1977-78
Elementary and Secondary Education (total school costs per pupil	actual	$1,082	$1,237	$1,410	$1,680	$1,976
	constant	$1,082	$1,110	$1,151	$1,282	$1,390
	index	100.0	102.6	106.4	118.5	128.5
CAAT's (operating grant per FTE student)	actual	$2,082	$2,496	$2,880	$3,216	$3,421
	constant	$2,082	$2,241	$2,351	$2,455	$2,406
	index	100.0	107.6	112.9	117.9	115.6
Hospitals (operating expenses per patient day)	actual	$81.49	$97.36	$119.52	$135.86	$148.43
	constant	$81.49	$87.40	$97.57	$103.71	$104.38
	index	100.0	107.3	119.7	127.3	128.1
Adult Offenders (expenditure per inmate)	actual	$ 900	$1,158	$1,159	$1,351	$1,482
	constant	$ 900	$1,040	$ 946	$1,031	$1,042
	index	100.0	115.6	105.1	114.6	115.8
Provincial Parks (expenditure per visitation)	actual	$ 2.13	$ 3.16	$ 2.95	$ 3.46	$ 3.42
	constant	$ 2.13	$ 2.84	$ 2.41	$ 2.64	$ 2.41
	index	100.0	133.3	113.2	123.9	113.2
Universities (operating grant per FTE student)	actual	$2,428	$2,621	$2,888	$3,272	$3,684
	constant	$2,428	$2,353	$2,358	$2,498	$2,397
	index	100.0	96.9	97.1	102.9	106.7

[3] System on the Brink, p. 6

Elementary and secondary schools, colleges of applied arts and technology, hospitals, care and treatment of adult offenders and provincial parks, all are compared with universities over the five-year period from 1973-74 to 1977-78. Comparisons are on the basis of actual programme outputs - how much tax money is spent for each student in elementary and secondary school, CAAT or university? How much money is spent by hospitals for each patient? How much does it cost to keep each adult in a correctional institution or jail? How much is spent on provincial parks per individual using those parks? Extended further back in time where data are available, these indicators, as illustrated in Figure 1-1, show unequivocally that the government has chosen to afford to other publicly supported activities levels of funding that more closely reflect real need than has been the case with universities.

Throughout this period, the Government of Ontario has continued to assert that it affords high priority to funding our university system. Throughout this period, the Government of Ontario has continued to assert that its objectives of accessibility and quality remain unchanged. Throughout this period, the funding of universities has continued to decline vis-à-vis universities elsewhere in Canada and vis-à-vis other publicly supported activity in Ontario. And we cannot help but note that university

grants in 1980-81 will enjoy a lesser increase than any other sector for which 1980-81 funding has been announced.[4] Clearly publicly stated policy and the facts are no longer in accord.

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[4] Ordinary operating grants to the CAAT's increased 7.5%, to $308 million, but this was supplemented by an additional $12.9 million for 1980-81. Total provincial operating funds available to the CAAT's increased from $293.6, in 1979-80, to $320.9 million in 1980-81 - an increase of 9.3% from one fiscal year to the next.

Transfer payments to hospitals increased by 7.8%, to $2.27 billion, for 1980-81. Total provincial transfers to municipalities and their agencies for 1980 increased by 10.8%, to $1,997 million - up by $194 million. This included unconditional transfers from the Ministry of Intergovernmental Affairs - increased by 10.4% - plus an increase of about 5.5% in transportation grants, an increase of 10.5% in 1980-81 for cost-shared social services provided by municipalities, and an increase of 153% in grants from the Ministry of Environment.

General Legislative Grants for 1980-81 for elementary and secondary schools were increased by 6.6% over 1979-80, but an additional grant of $35 million for assessment equalization brought the level of provincial support to $2,224 million - an increase of 8.3% over the previous year.

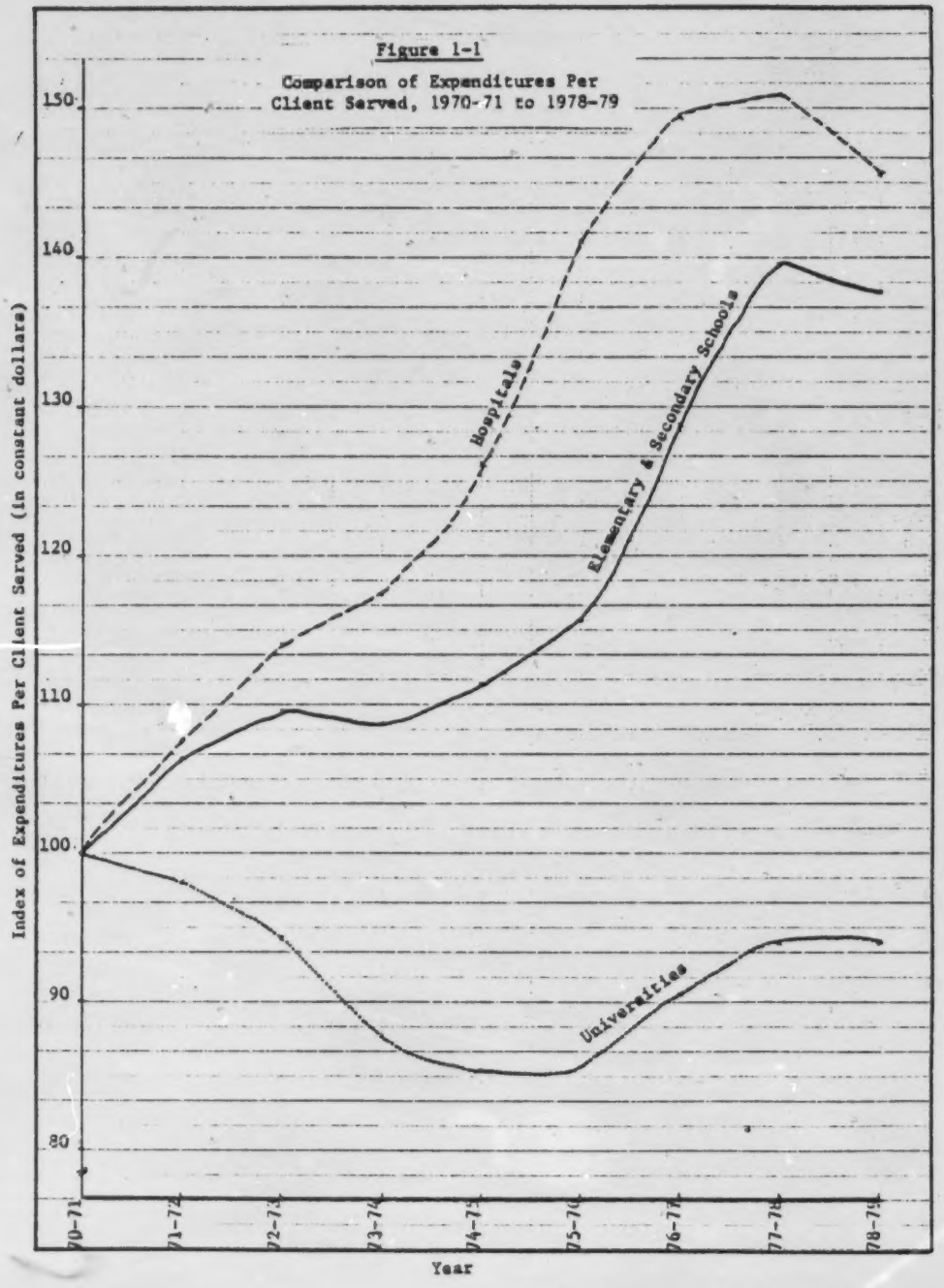
Figure 1-1
Comparison of Expenditures Per Client Served, 1970-71 to 1978-79
Index of Expenditures Per Client Served (in constant dollars)
150
140
130
120
110
100
90
80
Hospitals
Elementary & Secondary Schools
Universities
70-71
71-72
72-73
73-74
74-75
75-76
76-77
77-78
78-79
Year

2.0 SYSTEM REQUIREMENTS FOR 1981-82

2.1 The Impact of Inflation on Salaries

Salaries paid by Ontario universities in 1978-79 represented 72.7% of total operating expenditure and are clearly the largest single item to be considered in estimating university financial requirements for 1981-82. In consequence, it becomes critically important that we be as realistic as possible in making provision for the costs of salary inflation in our advice to OCUA. The Operating Grants Committee has no particular expertise, however, in forecasting rates of inflation and has adopted OCUA's position of relying on others for such expertise.

The Economic Council of Canada has provided two "realistic" projections of annual percentage increases in the Consumer Price Index, the two projections differing in terms of the rate at which Canadian crude oil prices move toward international prices. The federal Department of Finance has also provided two alternative projections based on the provisions of the Budget Speech of December 11, 1979, delivered by the Honourable John Crosbie, Minister of Finance. These data, presented in Table 2-1 form the basis for assumptions about inflation contained in the present brief.

Table 2-1

Projected Annual Percentage Increases in the Consumer Price Index

	1980	1981	1982	1983	1984
Economic Council[1] of Canada					
Canadian crude = world prices by 1986	8.6	8.5	8.5	9.0	8.3
Canadian crude = world prices by 1982	9.6	9.5	9.2	8.8	7.6
Department of Finance[2]					
Low-Price Scenario	11.0	10.1	8.4	7.6	6.5
High-Price Scenario	11.0	11.4	10.3	9.1	8.0

	1979-80	1980-81	1981-82	1982-83	1983-84
Average of 4 Projections Adjusted to University Fiscal Year	9.6	10.0	9.6	8.9	8.4

[1] Two Cheers for the Eighties, Sixteenth Annual Review, 1979, Economic Council of Canada, pages 65, 92

[2] The Economic Assumptions Underlying the Fiscal Projections of the Budget December 11, 1979, Department of Finance, Canada, page 16.

2.1.1 Faculty Salaries

Table 2-2 demonstrates the inability of Ontario universities to pay salary increases to their faculty members at the same rate as have other employers during the 1970's. As a result, academic salaries paid by Ontario universities are lower than those paid by many universities elsewhere in the country.

Table 2-2

Average Salary Levels[1]

Profession		1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Economists[2,3]	$	19,983	21,523	24,754	27,943	30,060	32,479	34,007
	Index	100.0	107.7	123.9	139.8	150.4	162.5	170.2
Engineers[2,4]	$	18,597	19,911	23,531	26,462	29,314	31,449	33,275
	Index	100.0	107.1	126.5	142.3	157.6	169.1	178.9
Research Scientists[5]	$	15,964	17,000	19,489	21,385	23,146	25,418	27,516
	Index	100.0	106.5	122.1	134.0	145.0	159.2	172.4
Federal Govt. Employees Executive, Scientific and Professional - in Ontario[6]	$	16,296	17,398	19,446	22,726	23,488	25,755	28,021
	Index	100.0	106.8	119.3	139.5	144.1	158.0	172.0
Teachers - in Ontario[7]	$	11,602	12,596	14,268	15,809	19,253	21,040	22,692
	Index	100.0	108.6	123.0	136.3	164.0	181.4	195.6
Ontario University Faculty[8]	$	18,647	19,864	21,681	24,419	26,873	29,043	30,705
	Index	100.0	106.5	116.3	131.0	144.1	155.8	164.7
Ontario Government Ministries, all Salary Earners[9]	$	8,664	9,857	11,371	12,655	14,223	15,108	16,227
	Index	100.0	113.8	131.2	146.1	164.2	174.4	187.3

1. Data on average salaries have been converted to a base of 100 for 1972-73.

2. Salary figures have been adjusted to reflect Ontario salaries.

3. Economist-Statistician level 3 in manufacturing, communications, service and finance sectors. Data from Canada Pay Research Bureau.

4. Engineer level 5 in mining, manufacturing, communications, and service sectors. Data from Canada Pay Research Bureau.

5. Research Scientists in mining, manufacturing, communications and service sectors. Data from Canada Pay Research Bureau.

6. Salary of federal government employees in Ontario. "Federal Government Employment", Quarterly Report, Statistics Canada.

7. Average salary of secondary school teachers in Ontario. "Salaries and Qualifications of Teachers in Public, Elementary and Secondary Schools", Statistics Canada.

8. Full, associate and assistant professors only. "Salaries of Full-Time Teaching Staff at Canadian Universities", Statistics Canada.

9. Salary of Ontario government employees. "Provincial Government Employment", Quarterly Report, Statistics Canada.

Table 2-3 demonstrates what had occurred at universities in the four major regions of Canada by 1977-78. Even before the government's programme of fiscal restraint had serious impact on rates of salary increase to Ontario faculty, both the Quebec and the Western Canada universities had higher median academic salaries than those in this province. Of the four major regions, only the relatively small number of academic staff employed by the Atlantic provinces' universities were paid lower salaries than those in Ontario. Research by both CAUT and COU would suggest that salary differences between the Atlantic provinces and Ontario are decreased considerably in real income terms by lower housing costs in Atlantic Canada.

Table 2-3

Median Salaries of Teachers in Universities
1977-78

Region	Number of Staff Included	Median Salary
Western Provinces	8,215	$28,000
Ontario	12,356	$27,050
Quebec	7,000	$28,750
Atlantic Provinces	3,487	$22,800

Source: Statistics Canada, "Teachers in Universities, 1977-78".

On the other hand, even after taking tax differences into account, relatively low housing costs in Quebec tend to increase the real standard of living of their university faculty relative to their peers in Ontario.[5]

Some of these salary differences could, of course, be related to the ability of provincial governments to fund their respective universities. Wealthier provinces could be expected to provide better funding - and, therefore, higher salaries for academic staff - than poorer provinces. To test this relationship, a regression analysis of full-time university faculty median salaries (excluding medicine) for 1977-78 and median family income by province for 1977 was performed. The results of this least-squares regression analysis, shown in Figure 2-1, suggest a fairly strong relationship between the family income of people living in a province and the salaries of of full-time university faculty working in one of that province's universities.

The greatest degrees of deviation from the hypothesized relationship were in Saskatchewan and Quebec - where academic salaries were considerably higher than the average family incomes might lead one to expect - and in Ontario and New Brunswick, where

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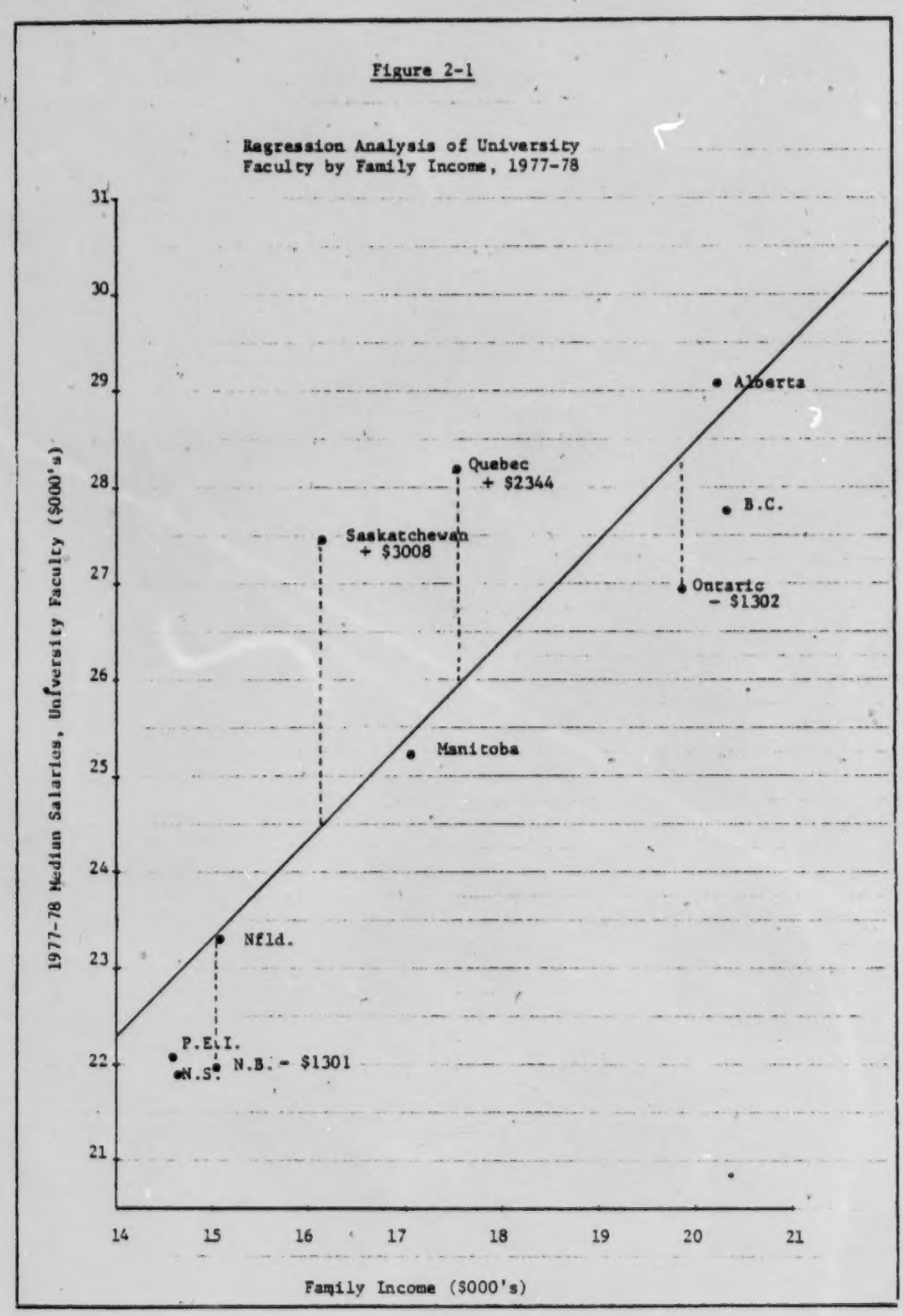
[5] Robert Leger and Rosalind Lambert "Taxes and housing costs across Canada: How they affect your income" CAUT Bulletin, September, 1979. The work by CAUT was updated by COU using recent data provided by Royal Trust and tax tables for the 1978 tax year.

Figure 2-1


Regression Analysis of University Faculty by Family Income, 1977-78
1977-78 Median Salaries, University Faculty ($000's)
Family Income ($000's)
31
30
29
28
27
26
25
24
23
22
21
14
15
16
17
18
19
20
21
Alberta
Quebec + $2344
B.C.
Saskatchewan + $3008
Ontario - $1302
Manitoba
Nfld.
P.E.I.
N.S.
N.B. - $1301

academic salaries were much lower than might have been expected. Taking account of the higher median age of Ontario university faculty and the relatively low rates of salary increase afforded to them in 1978-79 and 1979-80 would undoubtedly exacerbate these differences.

Table 2-4

Cumulative Salary Changes for the Period 1974 to 1979
(using consistent group compositions)

Policy Lines*

	100 Hay[1]	200 Hay[1]	400 Hay[1]
Industrial[2]	58.1%	55.3%	50.5%
Institutional[3]	54.9%	49.2%	46.5%
Universities[4]	47.6%	42.4%	42.2%

Total Compensation Lines**

	100 Hay[1]	200 Hay[1]	400 Hay[1]
Industrial[2]	56.4%	56.0%	49.1%
Institutional[3]	49.6%	51.9%	48.3%
Universities[4]	45.9%	43.5%	47.4%

1. 100 Hay, 200 Hay and 400 Hay represent increasing levels of responsibility. All data from Hay Associates Canada Ltd. management compensation comparisons.
2. Data for a substantial sample of large and medium size industrial organizations across Canada.
3. Data for a sample of educational, governmental and health organizations across Canada.
4. Data for 4 Ontario universities participating in Hay Associates Canada Ltd., management compensation surveys.

* Policy Lines are the midpoints of the salary ranges.

** Total Compensation Lines are based upon actual total compensation paid to staff.

2.1.2 Non-Academic Staff

A similar situation exists with respect to the non-academic staff employed by Ontario universities. Table 2-4 compares management compensation increases, between 1974 and 1979, for industrial companies, institutions (educational, governmental, or health), and universities. Comparisons of both average salaries and total compensation are included. But no matter which sorts of comparisons are made, management salaries in Ontario universities have become less and less competitive throughout the 1970's.

Table 2-5 compares Ontario university secretarial and clerical staff salary increases with increases paid in other sectors. Because of the relative mobility of secretarial and clerical staff, universities have had to pay salaries competitive with those offered by other employers in their respective communities. Nonetheless, even here, average salaries have fallen modestly behind those paid in other sectors.

Table 2-5

An Index of Average Salary Levels
Non-Academic Staff

	1972	1973	1974	1975	1976	1977	1978
University Support Staff[1]	100.0	107.3	118.0	134.4	151.8	166.6	180.0
Stenographer[2]	100.0	110.4	127.1	142.6	159.9	178.0	188.4
Typist[2]	100.0	110.2	127.4	145.1	163.6	178.6	193.6
Unskilled Laborer[2]	100.0	108.1	121.7	142.7	155.3	165.8	176.8
Draftsman[2]	100.0	106.5	117.3	132.7	146.3	163.0	181.3

1. Derived from COU Research Division survey of salary increases for Ontario university secretarial/clerical staff. Index based on weighted average of sum of scale and merit increases, with adjustments for calendar year comparison.
2. Salary Trends and Characteristics in Industrial and Other Organizations, Pay Research Bureau.

2.1.3 Provision for Salary Increases in 1981-82

The evidence presented in sections 2.1.1 and 2.1.2 above make it clear that Ontario's universities have exercised a level of restraint in affording salary increases to all staff which they believed was to have been expected of all sectors of society. The staff themselves have borne the burden of this restraint by accepting lower salary increases than non-university peers and colleagues. In the face of this evidence, the Operating Grants Committee feels, therefore, that it must use a more realistic provision for inflation than it has in the past. We therefore recommend increased funding to allow for scale increases for faculty and staff in 1981-82 that take full account of expected inflation for that year, i.e. 9.6%.

2.2 Increasing Cost of Benefits

Throughout the 1970's, the cost to universities of employee benefits for both academic and non-academic staff increased at a rate faster than either salary costs or operating expenses as a whole. As the Operating Grants Committee attempted to point out in its brief last year, the rate of increases in benefits at universities was not out of line with - indeed, often less than - the rate of increase in benefit costs in other sectors of the economy. For example, in the Ontario public service, benefits as a proportion of salaries increased from 9.9% in 1971-72 to 16.8% in 1978-79,

an increase of approximately 70%. For the university sector, Table 2-6 shows that benefit costs relative to salaries have grown from 8.8% to 11.7% during the same period, an increase of about 30%. This growth in benefit costs as a proportion of salaries has clearly been at most a modest reflection of compensation trends evident throughout all sectors of our economy.

Table 2-6

Benefit Costs and Increases Relative to Salary Expenditure 1970-71 to 1978-79

(Excluding Algoma, Nipissing, Hearst, OCA, OISE, Ryerson, Wilfrid Laurier)

	% Increase in Salary Expenditure	% Increase in Benefit Expenditure	Benefits as a % of Salaries	Ontario Public Service Benefits as a % of Salaries
1970-71			8.3	
1971-72	14.4	22.4	8.8	9.9
1972-73	7.1	13.4	9.4	10.6
1973-74	8.0	9.9	9.5	11.3
1974-75	12.7	16.7	9.9	11.8
1975-76	14.3	25.2	10.3	13.6
1976-77	11.1	16.8	11.3	15.1
1977-78	7.3	6.9	11.3	14.8
1978-79	4.8	9.2	11.7	16.3

Source: COFO-UO Total Revenue and Expense Reports
Public Accounts, Province of Ontario, various years

In attempting to explain these increases in benefit costs, the Operating Grants Committee has been surveying COU member institutions for several years. The results of the Committee's most recent survey are presented in Table 2-7. For fiscal year 1978-79, the last year for which actual data are available, total benefit costs, for those institutions surveyed, increased by 8.5% over the previous fiscal year, 1977-78. This is one of the lowest rates of increase of any year during the 1970's, but it is still 80% higher than the rate of growth of salary costs. The 8.5% compares with an 18.1% increase experienced by the Ontario government with respect to its own benefit costs during this period.

For fiscal year 1979-80, the universities surveyed are projecting a 4.8% increase in benefit costs over 1978-79. While these projections have traditionally been lower than actual experience, recent performance of pension funds has clearly caused a substantial decrease in payments for experience deficiencies and past service liabilities. Eliminating these two lump sum payments results in a projected increase of 7.2% during 1979-80. From these observations, it would appear that benefit costs during 1979-80 will grow at least as fast as salary costs.

Notwithstanding this most recent evidence, the Operating Grants Committee believes that benefit cost increases in excess of salary

Table 2-7

Comparison of Benefit Costs
1977-78, 1978-79 and 1979-80

	1977-78	1978-79	Increase 77-78 to 78-79 %	Projected Increase 78-79 to 79-80 %
Total Salaries ($000's)	626,199*	655,782*	4.7	6.9
	%	%	%	%
Pension: Current Service	51.6	51.7	8.3	7.2
Group Life	5.5	5.0	-1.8	5.7
Long Term Disability	2.6	2.7	13.4	6.9
Dental	1.8	2.9	71.4	14.6
OHIP	8.2	8.7	14.5	5.5
Canada Pension	8.4	8.3	6.5	10.9
Workmen's Comp.	1.4	1.2	-3.6	17.2
Unemployment Insurance	10.3	9.5	-0.9	1.9
Other	2.3	3.2	49.9	10.4
Subtotal	92.0	93.0	9.3	7.2
Experience Deficiency	2.9	2.4	-9.7	-61.5
Past Service Liability	5.1	4.6	-1.8	- 9.5
Total Benefits %	100.0**	100.0**		
($000's)	70,075*	76,032*	8.5	4.8

Notes: * Excludes OCA
** Percentages may not total to 100.0% due to rounding

increases have been and will continue to be a fact of life. We recommend therefore that OCUA reconsider our advice of last year that a provision for increased benefit costs be made at a level 30% higher than that afforded for increased salary costs. To do otherwise would be to constrain the university community from responding in any way to pressures that are evident in all sectors of our economy.

2.3 Non-Salary Inflation

In past years, the Operating Grants Committee has presented the results of constructing and updating an Ontario University Non-Salary Price Index (OUNSPI). This index was constructed to better measure the rate of inflation as it affects Ontario universities.

This year, minor revisions have been undertaken to make the index a more reliable indicator. The results of these revisions and of the updated data employed are shown in Table 2-8. Detailed results appear in the Appendix to this brief.

Table 2-8 indicates that there was a 10.9% annual increase in OUNSPI during 1978-79, compared with a 9.1% increase in the more general CPI during the same time period. Since the CPI has been consistently below measurements of non-salary cost increases

experienced by universities, projections of total cost increases detailed earlier in the brief would appear to be too low for non-salary items of expenditure. Instead of the 10.0% and 9.6% increases in the CPI projected for 1980-81 and 1981-82 respectively, non-salary prices can be expected to increase by 12.3% and 11.5% in each of these two years.

Table 2-8

Ontario University Non-Salary Price Index

(1980 revision: 1970-71 = 100)

Year	OUNSPI	CPI	OUNSPI Annual % Increase	CPI Annual % Increase
Actual				
1970-71	100.0	100.0		
1971-72	104.1	103.9	4.1	3.9
1972-73	107.8	109.2	3.6	5.1
1973-74	120.1	118.9	11.4	8.9
1974-75	140.6	132.5	17.1	11.4
1975-76	155.8	145.6	10.8	9.9
1976-77	170.3	155.7	9.3	6.9
1977-78	192.2	169.1	12.9	8.6
1978-79	213.1	184.5	10.9	9.1
Estimated				
1979-80	238.2	202.2	11.8	9.6
1980-81	267.6	222.4	12.3	10.0
1981-82	298.3	243.8	11.5	9.6
1982-83	330.2	265.5	10.7	8.9
1983-84	363.6	287.8	10.1	8.4

2.4 Progress through the Ranks

OCUA and COU have agreed in the past that a weighted system average of 2.0% for PTR is appropriate. No evidence has become available to the Operating Grants Committee which would suggest that the PTR factor should change.

OCUA should be aware, however, that COU is attempting to design a faculty flow model which will include salary parameters. Results from the model are anticipated shortly and will be transmitted to OCUA should it appear that the 2% provision for PTR needs revision.

2.5 Provision for Equipment Replacement

Previous briefs to OCUA from the Operating Grants Committee have drawn attention to the extreme difficulty which universities have faced in assigning sufficient funds for equipment replacement. COU has estimated the current value of equipment in Ontario universities to be about $800 million. If we assume that 20% of this amount was derived from and should be replaced from research funds, we arrive at a current stock of equipment valued at $640 million whose replacement must be financed from operating funds. Assuming a conservative 15 year replacement

cycle for equipment suggests that universities should be spending $42.7 million for equipment replacement in 1979-80. Preliminary budget data suggest that only one half this amount can presently be made available.

If we examine the pattern of spending on equipment replacement presented in Table 2-9, we note that equipment expenditure in constant dollars declined from $18.4 million in 1972-73 to $15.0 million in 1978-79. What is not evident, however, is that the $18.4 million in 1972-73 represented only 56% of the cost of equipment purchased that year. At that time, capital funding still bore a very large share of equipment acquisition costs. In 1978-79, operating funds were covering 88% of equipment acquisition costs. This change in funding source is, we believe, the most significant factor in justifying a provision for equipment replacement under the general rubric "existing service level costs".

Given that about 50% of present equipment stocks have been financed from capital funds and given a conservative 15 year replacement cycle, it is evident that 3.3% of $640 million, or $21.3 million in 1979-80 dollars, needs to be added to the non-salary base to cover the replacement costs of equipment originally purchased out of capital funds. This represents about 12.5% of the 1979-80 non-salary base and could be effected over a five year period with a provision of 2.5% of additional non-salary funds each year.

Table 2-9

Operating Expenditures on Furniture and Equipment
Adjusted for Inflation[1] 1972-73 to 1978-79
(excluding Algoma, Ryerson, OCA, OISE)

		1972-73 $000,000	1973-74 $000,000	1974-75 $000,000	1975-76 $000,000	1976-77 $000,000	1977-78 $000,000	1978-79 $000,000
Furniture & Equipment (minus computing costs)	Actual	8.6	8.5	9.7	13.1	13.4	14.0	14.2
	Adjusted	8.6	8.0	7.7	9.3	9.1	8.4	7.5
Computing Costs	Actual	9.8	10.3	10.7	8.9	7.9	8.5	10.2
	Adjusted	9.8	9.9	10.3	8.0	6.9	6.7	7.5
Total	Actual	18.4	18.8	20.4	21.9	21.3	22.5	24.4
	Adjusted	18.4	17.9	18.0	17.3	16.0	15.1	15.0

1 OUNSPI components

Had OCUA's advice to the government been consistently accepted since it was first proffered, we would have achieved that goal in the 1980-81 fiscal year. Clearly that has not happened, however, and we continue to recommend a 2.5% provision for equipment replacement.

2.6 The Efficiency Factor

Little has occurred during the past year which would alter the Operating Grants Committee's previous comments on this matter. The -0.7% factor employed by OCUA admittedly lacks rationale and reflects a purely subjective judgement on OCUA's part of some desirable measure of university restraint. The Operating Grants Committee continues to view the use of such arbitrary judgements within the context of an otherwise rational system funding model as entirely inappropriate. It therefore reiterates its recommendation that a -0.1% efficiency factor be employed.

2.7 Projected Enrolment Variation

2.7.1 1979-80 Enrolment Summary

When preparing its enrolment projections a year ago for the 1980-81 operating grants brief to OCUA, the Committee on Enrolment Statistics and Projections took into account

enrolment declines in 1977-78 and 1978-79. A number of factors, including stable secondary school year 5 enrolment, the decline of 6% in first year enrolment in 1977-78 and continuing enrolment declines in 1978-79 in education programmes, upper year undergraduate and at the graduate level, led CESP to project a 2.5% decline in both undergraduate and graduate enrolment for 1979-80.

Detailed data on full-time enrolment for 1979-80 have been provided to CESP by the universities and summary data on part-time enrolment were obtained from MCU. These data show that full-time undergraduate enrolment in the Ontario universities remained stable in 1979-80 (registering an increase of 0.1%) and full-time graduate enrolment showed a slight increase of just under 1%. Part-time undergraduate enrolment registered an increase of over 6% and part-time graduate enrolment (full-time equivalents) remained relatively stable (showing a slight increase of 0.2%).

Upon closer examination of full-time enrolment, the detailed data showed that first year undergraduate enrolment (excluding education and professional programmes such as law and medicine) increased by 4%. New registrants from secondary school year 5 went up by 1% in spite of a decline in year 5 enrolment in the previous year and new registrants from all other sources

increased by 5%. Reversing the pattern of the previous year, first year enrolment in arts and science programmes was higher in 1979-80 by 4%. In addition, first year enrolment in commerce and business programmes grew by 6% and in engineering by 5%.

Undergraduate enrolment in upper years (again excluding education and professional programmes) declined 1%, reflecting the declines in first year intake in the two preceding years. Arts and science enrolment was down by 2% while enrolment in commerce and business programmes was up by almost 10%, engineering increased by 5%. Upper year enrolment in other programmes remained relatively stable.

Total undergraduate enrolment in education programmes dropped by 11% in 1979-80. Enrolment in professional programmes increased marginally.

At the graduate level, full-time enrolment in masters and first stage doctoral programmes increased by nearly 2% while at the second stage doctoral level there was a slight decline of 0.3%. In both cases the number of new entrants appeared healthy; at the masters and first stage doctoral level new entrants were up by 5% and at the second stage doctoral level new entrants rose about 4%.

2.7.2 Projections for 1980-81

University enrolment in Ontario appears to be relatively stable at the present time and a slight increase or decrease in any given year should not be unexpected. In making its projections in the previous two years, CESP has been unable to find any reliable predictor of the magnitude of the fluctuations that have occurred. The 18-24 years of age population in Ontario continues to increase and yet Ontario universities experienced enrolment declines in 1977-78 and 1978-79. It was assumed that a number of factors were at work causing this enrolment decline, including the uncertain state of the economy and widespread misunderstanding of the value of a university education. While economic factors remain unchanged, the public's perception of the university experience appears to have improved. Clearly, Ontario universities enjoyed a modest increase in enrolment in 1979-80.

a) Full-time undergraduate enrolment

Statistics from the Ministry of Education showed a slight decline in secondary school year 5 actual enrolment in the fall of 1979. However, CESP feels that the ratio of year 5 students going on to university will be slightly higher than in the previous year and will ensure that new entrants from this source do not decline in 1980-81. CESP can see no indications that new entrants from other sources will

increase at the same rate as in the current year, but feels that an increase of 1-2% might be expected. Considering both sources of new entrants, CESP projects a slight increase of about 1% in first year undergraduate enrolment in 1980-81 (excluding education and professional programmes).

In considering upper year undergraduate enrolment (again excluding education and professional programmes), CESP believes that the pipeline effect of the 6% decline in first year enrolment in 1977-78 will have minimal impact in 1980-81. A much greater effect will result from the 4% increase in first year in 1979-80 and from the higher retention rate of students in upper years experienced by a number of universities this past fall. CESP therefore estimates that enrolment in upper years will also increase by about 1% in 1980-81. Enrolment in professional programmes should remain stable in 1980-81 but a further decline will be felt in education programmes. This decline should not be as severe as in the previous two years, but may well be of the order of 5%.

In summary, CESP predicts increases of approximately 400 students in first year and 800 in upper years, offset by a decline of 200 students in education programmes. This would result in a net increase in 1980-81 in full-time undergraduate enrolment of roughly 1000 students or about 1%.

b) Full-time graduate enrolment

Following declines in the previous two years, full-time graduate enrolment increased slightly in 1979-80. While enrolment in upper years was down slightly at both the masters and doctoral levels, new entrants into both levels increased. As the Committee is not aware of any factors other than offsetting ones, which might cause the general pattern in recent years of stabilized enrolment at the graduate level to change, CESP projects that full-time graduate enrolment in 1980-81 will remain at the 1979-80 level.

c) Part-time enrolment

Due to a greater degree of fluctuation evident in part-time enrolment in recent years, the Committee is less confident of its prediction of future levels of part-time enrolment. No evidence has been brought to the attention of the Committee that would suggest that different factors are influencing part-time enrolment than is the case for full-time. Accordingly, CESP will follow its practice of recent years and predict that part-time enrolment in 1980-81 will follow the pattern of full-time enrolment. This being the case, part-time undergraduate enrolment is expected to increase by about 1% and part-time graduate enrolment should remain at the 1979-80 level.

In summary, overall enrolment in the Ontario universities is projected to increase in 1980-81 by slightly less than 1%. The Operating Grants Committee again wishes to remind OCUA that this increase does not represent the enrolment change to be experienced by individual universities; enrolment shifts may vary considerably among institutions and these variations may have serious implications for some of them.

2.8 Stabilization Factor

Each of COU, OCUA and MCU recognize the validity of applying a 50% discount factor to enrolment variation in estimating the minimum financial requirements of the Ontario university system. The discount is explicit recognition of the fixed and variable nature of university costs and is applied not only to the system funding model but also to the distributive mechanism known as the Ontario Operating Grants Formula. With respect to the latter, we note that the stabilization factor has a differential impact upon individual programmes and because of programme mix, upon individual institutions. This arises because formula fees are an integral part of the basic income unit which drives the operating formula. Demonstrated at the extremes and using 1979-80 values, the loss of a general arts student results in the eventual loss of $1,762 or 62.8% of the total revenue (i.e. grants plus actual fees) generated by that student; the comparable figures for a

lost student in medicine are $7,472 or 53.3%. This is demonstrated in Table 2-10. The Operating Grants Committee is unable at present to suggest an alternative methodology for calculating institutional grants which would overcome this discrepancy. It does suggest, however, that an examination of this matter should be undertaken as soon as possible and it offers Council's assistance to OCUA in doing so.

Table 2-10
Hypothetical Income Loss Arising from an Enrolment Decrease of 1 Student

	Arts	Medicine
Basic Operating Income per student	$2,805	$14,025
Formula Fee	720	920
Grant per student	2,085	13,105
Grant discounted by 50%	1,043	6,553
Income lost: BOI-grant at 50%	1,762	7,472
Income lost: % of BOI	62.8%	53.3%

2.9 Minimum Financial Requirements for 1981-82

2.9.1 Establishing the Funding Base

The starting point for estimating minimum financial requirements for 1981-82, within the context of the OCUA system funding model, is a base funding value for 1980-81 against which the factors outlined in sections 2.1 to 2.8 can be applied. In order to avoid giving

official recognition to university deficits or to penalize institutions for operating surpluses, the assumption has been made and continues to be made that expenditures in any base year should be assumed to equal revenue.

Grant revenue of $838.8 million is a known factor and tuition fee revenue of $164.7[6] can be estimated with reasonable accuracy for 1980-81. "Other" revenue, although only 6% of the total, is much more difficult to predict and has for some years been the subject of occasional disagreement between COU and OCUA.

In last year's brief, the Operating Grants Committee argued for the exclusion from "other" revenue of grants in lieu of municipal taxes, of income from sales of goods and services and of revenue from interfund transfers. As can be deduced from Table 2-11, such income represented 60% of so-called "other" revenue in 1978-79. The case for excluding grants in lieu of municipal taxes must surely be clear; these grants are effectively transfers from the provincial to the municipal governments and have no bearing on university operations. With respect to income from sales and services, we have determined that these funds are substantially offsetting recoveries of directly related operating expenditure. The largest items in this category are rental changes for athletic

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[6] This excludes the additional fee revenue which could be generated were all institutions to raise fees in 1980-81 to 110% of formula levels.

Table 2-11

Analysis of 'Other' Revenue 1973-74 to 1978-79

($000's)

(excluding Algoma, Ryerson, OISE, OCA)

	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Federal Grants	759	659	248	166	121	261
Municipal Grants	312	517	258	257	263	262
Gifts, Grants	1,018	1,398	1,157	1,083	1,333	1,327
Sales				12,821	12,488	16,369
Investments				8,170	7,889	10,025
	17,981	24,265	27,248			
Miscellaneous				6,304	4,138	4,310
Interfund Transfers				3,853	4,192	5,444
	20,070	26,839	28,911	32,654	30,444	37,998
MCU Line Item	9,053	7,678	9,047	6,140	8,508	2,772
Municipal Taxes	6,085	6,362	7,023	7,444	7,566	7,382
	35,208	40,879	44,981	46,238	46,518	48,152

facilities, sale of computer services and OHIP billings. We continue to maintain that this revenue item is an artifice of present accounting practices of universities. With respect to interfund transfers, COFO data indicate that the bulk of these occur between trust and endowment funds and operating funds. In large measure they represent operating recovery of overhead on trust accounts and transfers to operating accounts of unrestricted endowment income. Clearly, the latter support general university operations but we would point out to OCUA that university operating accounts include items not eligible for government funding e.g. student aid. As a minimum, therefore, we continue to recommend that these three items - grants in lieu of municipal taxes, income from sales and services, and interfund transfers - be excluded from the calculation of "other" revenue.

Further, however, we would argue that a good case can be made for the exclusion of all "other" revenue from the OCUA system funding model. Given recent evidence, this might work to the disadvantage of universities since the OCUA model assumes that lack of growth of "other" revenue must be covered by increased grant or tuition revenue. From the government's point of view

therefore, this recommendation could be viewed as providing universities an incentive to cause "other revenue" to grow at least as fast as grant and fee revenue. From the universities point of view, the recommendation means that should they succeed in generating even greater growth in "other" revenue, they will not be penalized for having done so. From a technical point of view, the advantages of the recommendation are obvious. Following upon these considerations, we have excluded "other" revenue from the 1980-81 funding base and have established the components of the base - salaries, benefits and non-salary items - using the 1978-79 COFO distribution of operating expenditure, excluding municipal taxes and scholarships and bursaries.

2.9.2 A Summary of the Factors in the Calculation

Sections 2.1 to 2.8 of the present brief have outlined the rationale behind COU's advice to OCUA on the factors to be used in the OCUA funding model to estimate minimum financial requirements of Ontario's universities in 1981-82. These may be summarized as follows with reference to Table 2-12:

Column 2: Inflationary Trend Cost 1981-82 - Provision for salary inflation +9.6%, for benefits +12.5% and for non-salary items +11.5%. (See Sections 2.1, 2.2 and 2.3 respectively.)

Table 2-12

Estimate of the Cost of the COU Basic Funding Recommendations 1981-82

($000,000's)

	1 Estimated Expenditures 1980-81	2 Inflationary Trend Cost 1981-82	3 Existing Service Level Cost 1981-82	4 Efficiency Factor (negative)	5 Predicted Enrolment Costs + or (-)	6 Stabil-ization Factor + or (-)	7 Cost of Basic Objectives 1981-82
Salaries	725.5	69.6	15.9	(0.8)	7.3	(3.7)	813.8
Benefits	84.3	10.5	2.5	(0.1)	0.9	(0.4)	97.7
Non-Salary	193.7	22.3	5.4	(0.2)	2.0	(1.0)	222.2
	1003.5	102.4	23.8	(1.1)	10.2	(5.1)	1133.7

Column 3: Existing Service Level Cost 1981-82 - Provision for PTR on salaries +2.0%, the benefit implications of PTR +2.6% and for equipment replacement +2.5%. (See Sections 2.4 and 2.5.)

Column 4: Efficiency Factor - A discount for productivity of -0.1% is recommended. (See Section 2.6.)

Column 5: Predicted Enrolment Costs 1981-82 - Total enrolment is projected to increase by 0.9%. (See Section 2.7.)

Column 6: Stabilization Costs - System enrolment variation is discounted by 50%. (See Section 2.8.)

2.9.3 Cost of the COU Basic Funding Recommendations

Column 7 of Table 2-12 establishes the total cost of COU's basic funding recommendations at $1133.7 million. This represents an increase of 13.0% over the 1980-81 funding base. Assuming no change in enrolment between 1980-81 and 1981-82, and assuming grants and tuition fees increase at the same rate, then both would have to grow by this same 13.0%. Were tuition fees rates to remain constant in 1981-82, government grant revenue would have to be increased by 15.5% to meet these basic requirements.

It should be noted that funding of these minimum financial requirements will merely move Ontario's universities into 1981-82 protected from inflation and with modest provision for some enrolment growth. The recommendations make no attempt to restore ground lost by Ontario's universities vis-à-vis those elsewhere in Canada nor do they in any way address the qualitative impact of the recent shortfall in funding that has accumulated since 1977-78 when the government last saw fit to accept OCUA's advice. That shortfall will remain at a level of $180 million in 1981-82 even if all our advice is accepted.[7] We believe it imperative that the government

[7] This is derived from the $159.7 million shortfall identified for 1980-81, inflated by the rate of increase in the cost of the basic objectives identified for 1981-82.

acknowledge the extent of present underfunding and that it initiate a plan for restoring universities to a more appropriate funding base. At the same time, we recognize the government's real concern that growth in public expenditure be held within certain limits for the next few years. In these circumstances, Council is reluctant to make a specific recommendation which addresses the matter of underfunding. If our advice were sought, however, we would likely recommend that, in addition to the basic requirements outlined above and for a period of four successive years starting in 1981-82, a catch-up provision be afforded to the university sector at a level equivalent to 3.7% of base year funding.

2.10 Funding for Renovations and Alterations

The Operating Grants Committee also wishes to raise an issue regarding the funding of universities in 1981-82 which does not fall conveniently within the framework of the preceding discussion of the OCUA system funding model. The matter of funding for renovations and alterations, because it encompasses both capital and operating finance, has not normally been considered in our annual operating grants brief to OCUA. However, there has been little indication in recent years that the Ontario government is willing to assist Ontario universities in maintaining physical plant at anything approaching adequate levels.

In 1970-71, $7.0 million from capital and operating sources

was spent on renovations and alterations; the comparable figure (for the same institutions) in constant dollars in 1978-79 was $6.5 million. Yet during this period university space inventories grew by 43%. In effect, expenditure on renovations and alterations per net assignable square foot has dropped from 55¢ to 33¢ annually. And this decline has been experienced during a period when aging buildings and necessary retrofit for energy conservation should have caused the opposite to happen.

There can be little doubt that deferral of maintenance "results in an escalation of the original cost at an exponential rate".[8] Yet the virtual elimination of capital funds for renovations and alterations clearly cannot be met from already overstrained operating funds. The present Ontario government policy of restricting both capital and operating funds to universities has costs - both in the long and short run - which result from the inadequate levels of maintenance, renovation and alteration. In the short run, a lack of capital funds will actually tend to increase operating costs. In the long run, either major renovation costs will be increased or new construction will be required. Ontario universities must receive increased funding so that these long and short run costs can be reduced and buildings maintained at an adequate level.

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[8] Dr. Harvey H. Kaiser "Mortgaging the Future: The Cost of Deferring Maintenance, 1979, p. C-1

3.0 THE FINANCIAL OUTLOOK TO 1983-84

3.1 The Government's Programme of Fiscal Restraint

Any attempt to project the level of government support for universities in Ontario during the first half of the 1980's must be done in the light of the government's stated goal of bringing total expenditures in line with total revenues by 1983-84. To attain the goal of reducing cash requirements to zero

> requires that an average differential in the range of 2.5% between the rate of revenue growth and the rate of spending growth be maintained.[9]

The government's fiscal plan is based on the desire to meet all cash requirements out of current revenues. These requirements include items of expenditure which, in the private sector, could be considered as capital investment. Items like physical assets, buildings, land, or financial assets like mortgages or commercial loans are all to be financed directly from existing revenue.

Throughout the 1970's as Table 3-1 shows, the Ontario government financed 80% or 90% of its capital investments from borrowings. Only in two fiscal years, 1975-76 and 1977-78, was the government unable to finance current

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[9] Strengthening Fiscal Management - Budget Paper C" Ontario Budget, 1979

Table 3-1

Capital Investments and Net Cash Requirements

Province of Ontario, 1972-73 to 1979-80

($000,000's)

	Net Cash Requirements (Total Expenditures less Total Revenues = Borrowings)	Capital Investments	Current Funds Surplus (Deficit)
	(1)	(2)	(2) - (1) = (3)
1972-73	$1,028	$1,103	$ 75
1973-74	710	1,226	516
1974-75	851	1,399	548
1975-76	1,973	1,627	(346)
1976-77	1,092	1,480	388
1977-78	1,616	1,536	(80)
1978-79 (Interim)	1,337 *	1,376	39
1979-80 (Estimate)	1,153 *	1,591	438
Eight Year Total	9,760	11,338	1,578

Source: Ontario Budget, 1979 and Ontario Budget, 1978

*Note: More recent data suggest a sharply reduced level of net cash requirements for 1978-79 and 1979-80:
1978-79 Actual $1,180 net cash requirements;
1979-80 Revised Outlook $787 net cash requirements
(Source: Ontario Finances, December 31, 1979, Ministry of Treasury and Economics)
Unless the level of capital investments has declined considerably from that projected in the Budget, the size of the current surplus will be much greater than displayed in this table, perhaps nearly $1 billion in 1979-80 alone.

expenditures out of current revenue; in most years it was able to finance all current expenditures plus 10 or 15% of capital investments out of current revenues. This was based on the expressed belief that:

> Sound public finance suggests that government should finance its operating expenditures from current taxation and its capital expenditures from debt issues. Because capital investments are generally long lived assets, they benefit future generations as well as current taxpayers; long-term debt financing of capital expenditures ensures that the future work force shares in the costs as well as the benefits. [10]

The government's present budget plan is, therefore, at odds with its own fiscal policy enunciated as recently as 1978. All expenditures, both capital and current, are to be financed out of current revenues so that, by 1983-84, no borrowing will have to take place - even when the government wishes to make an investment in capital assets. The result has been to place all segments of the public sector under severe spending restraints. The $1 billion to $1½ billion of capital investments per year, previously financed by the provincial government largely through borrowings, are to be financed through taxation, transfer payments, etc. The only way this can be done is through large-scale cutbacks in government expenditures.

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[10] Ontario Budget 1978, "Ontario's Borrowing and Public Capital Creation", Budget Paper A.

For the university community, this is hardly an encouraging situation. Holding government expenditure growth to perhaps a quarter or a third less than government revenue growth makes it unlikely that operating grants to universities will ever achieve an adequate level during this period. While it is probable that higher than anticipated rates of inflation will generate some improvement in government revenues, this higher level of inflation will also make adequate funding levels that much more difficult to attain. In what follows, therefore, we make no attempt to seriously anticipate government revenue. Rather we simplistically extrapolate the government's holding its rate of increase in university operating grants to 7.2%, i.e. the level of increase afforded for 1980-81.

3.2 Minimum Requirements vs. Revenues

As the Operating Grants Committee stated in its brief last year, 1977-78 was the last fiscal year in which COU considered the level of increase in government funding to have closely approximated any rational estimate of system needs. In order to measure the full impact of the government's programme of fiscal restraint, we start, therefore, with 1977-78 as our base. Table 3-2 sets out COU's estimate of system financial requirements based on the OCUA funding model. Actual data on inflation and enrolment variation are used for the early years of the model. Inflationary trend cost calculations for salaries and non-salary expenditures are based in subsequent years on projections specified in Table 2-1

Table 3-2

Total Revenue Requirements of the Ontario University System to 1984-85

	$000,000	% Increase
1977-78	$848.3	-
1978-79	$931.2	9.8
1979-80	$1,027.3	10.3
1980-81	$1,163.2	13.2
1981-82	$1,314.8	13.0
1982-83	$1,462.1	11.2
1983-84	$1,618.0	10.7

Enrolment beyond 1980-81 is assumed to be constant. Base year funding is assumed to be the sum of all grants and tuition fees for 1977-78.

The model envisages minimum system requirements increasing from an annual level of $848.3 million in 1977-78 to $1,618.0 million in 1983-84, an average annual compound rate of growth of 11.4%.

Provincial grants and tuition fees are the two major components of university revenues. Table 3-3 sets out actual revenue for 1977-78 and 1978-79 and projected actuals for 1979-80 and 1980-81; subsequent years assume a 7.2% increase in both grants and fees.

Table 3-3

Projection of System Revenue to 1983-84 and Implicit Level of Underfunding

	Projected Revenue		Level of Underfunding	
	($000,000)	% Increase	($000,000)	% of Revenue
1977-78	$848.3	-	-	-
1978-79	$886.3	4.5	$44.9	5.0
1979-80	$934.2	5.4	$93.1	10.0
1980-81	$1,003.5	7.4	$159.7	15.9
1981-82	$1,075.8	7.2	$239.0	22.2
1982-83	$1,153.2	7.2	$308.9	26.8
1983-84	$1,236.2	7.2	$381.8	30.9

System requirements and system revenues are compared and the difference shown as the level of underfunding for the Ontario university system. These extrapolations suggest that, by 1983-84, underfunding will constitute 30% of system revenue. What creates so much anxiety about extrapolations of this sort is that each time we do them, the financial picture appears worse. Notwithstanding a significant improvement in funding levels in 1980-81 over 1979-80, the gap between requirements and revenue in 1983-84 has grown by over 50% since similar extrapolations were undertaken at this time last year. The villain of the piece is clearly inflation. But inflation is obviously not something over which universities have any control. Inflation tied to a programme of government fiscal restraint can be likened to being placed in double jeopardy. And for universities such stakes are too high.

3.3 The Impact of Underfunding

In past years, COU has taken financial extrapolations of this sort and hypothesized what impact they might have on faculty and staff complements. While still anxious to demonstrate the damage financial constraint might wreak on the pool of human talent essential to the primary objectives of Ontario's university system, we are cognizant of the fact that much attention has been focussed in the past on the specific number of terminations one might expect in any given year. As was noted in Section 1-3, universities have responded in a number of ways to budgetary restraint.

Perhaps the most significant alternative to complement reduction has been the limitation placed on salary increases during the past two years. Scale increases to compensate for a cumulative level of inflation of 19.1% have averaged only 9.2% and that has meant a lesser requirement for complement reduction than might otherwise have been the case. Notwithstanding, there still have been decreases in FTE faculty numbers. Table 3-4 sets out the record for the past three years and demonstrates a 2% cutback in university teaching resources. We will not this year extrapolate these cutbacks through 1983-84. We merely note that operating three years hence with 30% fewer dollars than are deemed to be necessary is to operate with 30% fewer resources of whatever description than are deemed to be necessary.

Table 3-4

Faculty Complement 1977-78 to 1979-80

	1977-78	1978-79	1979-80
Full-time Non-Medical	10,040	10,018	9,922
Full-time Medical/Dental	1,328	1,396	1,387
Part-time FTE Non-Medical	1,619.5	1,554.2	1,434.2
Part-time FTE Medical/Dental	200.7	185.9	182.9
	13,188.2	13,154.1	12,926.1

4.0 CONCLUSION

For the past several years, the Council of Ontario Universities has been urging, indeed exhorting, the Government of Ontario to provide the universities of this province with a minimal level of support, sufficient and no more, to protect existing levels of service. For the past several years, ignoring our advice as well as that of an agency which it itself appoints, the Government of Ontario has chosen not to do so.

In broad and direct terms, the results of the government's policy are readily apparent. Where once this province did more than most to support its university system, it now does less than most. In the year directly in front of us, we face a further increase in underfunding of some $60 million. Throughout the remainder of the government's programme of fiscal restraint the level of underfunding will reach staggering proportions.

COU is quite frankly baffled. Have our universities somehow become less important to Ontario than they once were? Does the Province need them less than it once did? Let us pause for a moment and reflect on the obvious. The universities of this province have provided and continue to provide the teachers

for our schools, the medical staff for our hospitals, the technical and managerial expertise to run our industry, the jurists to run our legal system, agriculturists to help advance our food production, engineers to help tap our natural resources, etc. The universities of this province have provided and continue to provide the senior staff essential in the provision of services which the Government of Ontario offers its constituents. They have provided and continue to provide the bulk of the basic and applied research essential to this province's future development. They have provided and continue to provide an invaluable pool of intellectual talent which government at all levels and the community at large draw on continually.

Let us look at the composition of our business leadership; with few exceptions the heads of all of the Financial Post's top 500 corporations are university graduates. Our military leaders, moral leaders, cultural and artistic leaders are now invariably university trained. Indeed, and this is perhaps the most frustrating of all, the bulk of our political leadership have all benefited from the enriching experience of university life.

What then can the government be telling us when it repeatedly ignores our advice and that of its own advisory council as to

the appropriate level of funding for this province's universities? That this province has a surplus of university graduates and that we must cut back on university entrants? Apparently not, for the Premier stated only last fall that university accessibility remains one of his government's highest priorities. (As Table 4-1 indicates, university graduates continue to have the best employment record in the country.) Is it saying instead that this province has too enriched a university system? We doubt it when we compare ourselves to universities elsewhere in Canada. It seems to be telling us, rather, that the need for this province to balance its budget by 1983-84 is so compelling that even the most rational case for increased funding cannot be sustained. It seems to be telling us that the only way to assure the economic well-being of the Province and thereby the future well-being of its university system is to pay the price now. We seriously doubt this to be the case.

Table 4-1

Canadian Unemployment Rates

Estimates by Educational Attainment

(Seasonally Unadjusted)

	December 1976	December 1977	December 1978	December 1979
Total Canadian Labour Force	7.4	8.3	7.9	7.0
0-8 Years	8.8	10.5	9.4	9.0
High School	8.4	9.5	9.0	7.8
Some Post-Secondary	6.4	6.9	7.0	4.8
Post-Secondary Certificate or Diploma	4.9	6.0	5.2	5.3
University Degree	2.9	3.0	3.4	2.8

Source: Estimates by Educational Attainment "The Labour Force" Monthly Report. Statistics Canada

Theodore W. Schultz, 1979 Nobel Laureate in Economics in his presidential address to the 73rd Annual Meeting of the American Economic Association, noted:

> Although it is obvious that people acquire useful skills and knowledge, it is not obvious that these skills and knowledge are a form of capital, that this capital is in substantial part a product of deliberate investment, that it has grown in Western societies at a much faster rate than conventional (nonhuman) capital, and that its growth may well be the most distinctive feature of the economic system. It has been widely observed that increases in national output have been large compared with the increases of land, man-hours, and physical reproducible capital. Investment in human capital is probably the major explanation for this difference.

Can it be that we have lost sight of the importance of our universities to the future of this province in our attempts to balance the budget? Can it be that we are mortgaging our future to pay our present debts?

APPENDIX

Update (1980) to the Ontario University Non-Salary Price Index

Two years ago, the Ontario University Non-Salary Price Index[1] was presented to OCUA. Since that time, the Research Division of COU has worked to update and improve that index. Last year's brief to OCUA included the results of revisions as of that date. Further revisions to the index have been undertaken and the results used in this year's brief. Details of those revisions have been presented in this Appendix.

The revisions made have not led to substantial changes either in the approach taken or the conclusions reached. The methodology, item content and weighting pattern of OUNSPI have remained unchanged from last year.

Books

The component index included in last year's report for Books, for the year 1977-78, was based on an estimate. A final figure was not available at that time. In this year's report, the index figure for Books for 1977-78 is now final and that for 1978-79 is an estimate.

Computing

The Consumer Price Index was used last year as a proxy for the computing hardware index. This year, the computing component index was based on data processing hardware costs derived from the monthly rental rates of the IBM 370, model 135 computer. The source of the data was a publication of the U.S. Department of Health, Education and Welfare, entitled Higher Education Prices and Price Index by D. Kent Halstead. These data, available in terms of American dollars, were then converted according to the official rate of exchange into Canadian dollars, using the Statistics Canada publication, Quarterly Estimates of the Canadian Balance of International Payments, System of National Accounts. The result is a more firmly based component index for computing hardware, although the impact on OUNSPI as a whole is marginal.

Telephone and Long Distance

Last year, the Consumer Price Index listed 'Telephone' as a component. In October, 1978 this component was reconstructed and is now labelled 'Communications'. Therefore, the indices for Telephone and Long Distance costs were recalculated using the Statistics Canada 'Communications' component.

Conclusion

The results of these revisions and of the addition of one extra year of data are presented in Tables A-2 and A-3. The weighting pattern, used to construct a consolidated OUNSPI, is shown in Table A-1 and the resulting OUNSPI itself reported in Table 2-8 within the text of the brief itself. Finally, Figure A-1 provides a list of sources used to construct the component indices.

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[1] Ontario University Non-Salary Price Index, COU, February, 1978

Table A-1

Non-Salary Price Index Weighting Pattern

Item Component	Index Weight
Books	6
Periodicals	5
Equipment	8
Computing	6
Furniture	3
Stationery & Paper	10
Printing Materials	9
Tools & Apparatus	9
Chemicals	5
Postage	2
Long Distance	2
Electricity	9
Gas	5
Oil	3
Telephone	3
Renovations	2
Transportation	5
Shelter	2
Food Away From Home	2
Insurance	2
Space Rental	2
	100

Table A-2

Component Price Indices in the Ontario University Non-Salary Price Index (Based on Fiscal Year 1970-71 = 100)

Component	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Books	100.0	109.9	105.8	100.2	113.2	135.3	140.9	168.0	204.2
Periodicals	100.0	108.3	120.5	149.0	159.3	186.6	204.3	240.6	294.2
Equipment	100.0	101.4	101.8	107.1	127.7	144.4	151.0	175.9	202.4
Computing	100.0	97.7	99.3	102.9	103.0	110.2	114.1	126.9	134.7
Furniture	100.0	105.0	109.9	122.0	140.0	151.9	161.1	169.0	180.9
Stationery & Paper	100.0	101.1	103.1	124.0	165.9	180.9	187.5	196.9	216.4
Printing Materials	100.0	101.7	106.3	130.4	161.0	164.5	163.3	170.1	182.4
Tools & Apparatus	100.0	103.2	105.6	112.8	130.9	145.2	154.6	172.5	190.7
Chemicals	100.0	101.1	102.9	114.2	149.0	163.9	170.8	181.0	196.7
Postage	100.0	112.3	120.8	120.8	120.8	121.3	144.7	181.3	212.1
Long Distance	100.0	102.6	107.2	109.2	110.3	114.4	122.9	134.3	141.8
Electricity	100.0	104.9	112.1	121.1	131.0	143.3	183.8	235.8	248.3
Gas	100.0	101.5	101.9	106.9	120.2	151.2	184.6	213.4	244.6
Oil	100.0	111.7	108.0	166.7	253.6	279.2	330.9	399.8	459.0
Telephone	100.0	102.6	107.2	109.2	110.3	114.4	122.9	134.3	141.8
Renovations	100.0	104.4	109.8	122.9	146.2	154.3	162.9	174.0	193.3
Transportation	100.0	103.9	105.8	111.1	123.3	138.4	151.2	160.3	170.8
Shelter	100.0	105.3	111.6	118.9	128.1	140.5	155.8	169.0	180.4
Food Away From Home	100.0	104.5	112.4	130.1	154.1	172.4	185.2	195.1	212.1
Insurance	100.0	128.5	155.4	190.2	215.3	271.2	328.7	368.9	390.6
Space Rental	100.0	105.3	111.6	118.9	128.1	140.5	155.8	169.0	180.4

Table A-3

Annual Percentage Variation in the Ontario University Non-Salary Price Index Components

Component	1970-71	1971-72	1972-73	1973-74	1974-75	1975-76	1976-77	1977-78	1978-79
Books	-	9.9	(3.7)	5.3	13.0	19.5	4.1	19.2	21.5
Periodicals	-	8.3	11.3	23.7	6.9	17.1	9.5	17.8	22.3
Equipment	-	1.4	0.4	5.2	19.2	13.1	4.6	16.5	15.1
Computing	-	(2.3)	1.6	3.6	0.1	7.0	3.5	11.2	6.2
Furniture	-	5.0	4.7	11.0	14.8	8.5	6.1	4.9	7.0
Stationery & Paper	-	1.1	2.0	20.3	33.8	9.0	3.6	5.0	9.9
Printing Materials	-	1.7	4.5	22.7	23.5	2.3	0.7	4.2	7.2
Tools & Apparatus	-	3.2	2.3	6.8	16.0	10.9	6.5	11.6	10.6
Chemicals	-	1.1	1.8	11.0	30.5	10.0	4.2	6.0	8.7
Postage	-	12.3	7.6	-	-	0.4	19.3	25.3	17.0
Long Distance	-	2.6	4.5	1.9	1.0	3.7	7.4	9.3	5.6
Electricity	-	4.9	6.9	8.0	8.2	9.4	28.3	28.3	5.3
Gas	-	1.5	0.4	4.9	12.4	25.8	22.1	15.6	14.6
Oil	-	11.7	(3.3)	54.4	52.1	10.1	18.5	20.8	14.8
Telephone	-	2.6	4.5	1.9	1.0	3.7	7.4	9.3	5.6
Renovations	-	4.4	5.2	11.9	19.0	5.5	5.6	6.8	11.1
Transportation	-	3.9	1.8	5.0	11.0	12.2	9.2	6.0	6.6
Shelter	-	5.3	6.0	6.5	7.7	9.7	10.9	8.5	6.7
Food Away From Home	-	4.5	7.6	15.7	18.4	11.9	7.4	5.3	8.7
Insurance	-	28.5	20.9	22.4	13.2	26.0	21.2	12.2	5.9
Space Rental	-	5.3	6.0	6.5	7.7	9.7	10.9	8.5	6.7

Figure A-1

Source of Component Indices

Component	Source
Books	Bowker (U.S.) Hardcover Book Price Index converted for Canadian dollar fluctuations
Periodicals	Bowker (U.S.) Periodical Price Index, converted for Canadian dollar fluctuations
Equipment	U.S. Bureau of Statistics Wholesale Price Index for Machinery and Equipment, converted for Canadian dollar fluctuations
Computing	U.S. Department of Health, Education and Welfare. Higher Education Prices and Price Index - data processing hardware. Converted for Canadian dollar fluctuations
Furniture	Statistics Canada Industry Selling Price Index - Office Furniture Manufacturers
Stationery & Paper	Statisitcs Canada Industry Selling Price Index - Paper and Allied Products
Printing Materials	Statistics Canada Industry Selling Price Index - Fine Papers
Tools & Apparatus	Statistics Canada Industry Selling Price Index - Hardware, Tools and Cutlery Manufacturers
Chemicals	Statistics Canada Industry Selling Price Index - Chemical & Chemical Products
Postage	Statistics Canada Consumer Price Index - Postage
Telephone, Long Distance	Statistics Canada Consumer Price Index - Communications
Electricity	Statistics Canada Electric Power Selling Price Index (Non-Residential) consumers over 5,000 kw, Ontario
Gas	Statistics Canada Consumer Price Index - Gas
Oil	Statistics Canada Industry Selling Price Index - Heavy Fuel Oil, #6
Renovations	Statistics Canada Non-Residential Construction Price Index - Materials
Transportation	Statistics Canada Consumer Price Index - Transportation
Shelter, Space Rental	Statistics Canada Consumer Price Index - Shelter
Food Away From Home	Statistics Canada Consumer Price Index - Food Away From Home
Insurance	Statistics Canada Consumer Price Index - Homeowner's Insurance Premium